

SAD #2  
8.30.01  
Patent

Attorney Docket: 265/247

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Jing Cheng et al.

Serial No.: Not Yet Assigned

Filed: Herewith

For: **CHANNEL-LESS SEPARATION OF  
BIOPARTICLES ON A  
BIOELECTRONIC CHIP BY  
DIELECTROPHORESIS**

Group Art Unit: 1743

Examiner: J. Storsiak

J. Warden



INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Applicant hereby discloses to the Patent Office patents, publications, and other information of which they are aware. A Form PTO-1449 listing the above items for consideration by the examiner is attached hereto. Copies of the cited references were previously cited by or submitted to the Patent Office in connection with the prior application Serial No. 09/546,099 which this application claims priority under 35 U.S.C. § 120. Accordingly, copies of the cited references are not being separately provided in this application pursuant to 37 C.F.R. § 1.98(d).

OC-86906.1

CERTIFICATE OF MAILING  
(37 C.F.R. § 1.10)

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as 'Express Mail Post Office To Addressee' in an envelope addressed to the Commissioner for Patents, Washington, D.C. 20231.

EL496950924US  
Express Mail Label No.

July 13, 2001  
Date of Deposit

Adriana Mojarro

Name of Person Mailing Paper

Adriana Mojarro  
Signature of Person Mailing Paper

The items cited on the attached Form PTO-1449 may or may not be material to the patentability of the claims in the above-identified application, and their submission is not to be construed as an admission that the items are material or considered to be material (37 C.F.R. § 1.97(h)), or even that they qualify as "prior art" under 35 U.S.C. § 102 with respect to the claimed invention unless specifically designated as such. Identification of any publication or patent having an issue date or a publication date after the statutory bar date is not an admission that the publication was published, or that the patent was filed, before the invention claimed in this application was made by Applicant.

The filing of this Information Disclosure Statement is not to be construed to mean that a search has been made or that additional information material to the examination of this application does not exist.

No Fee

Because this statement is being submitted prior to the first action on the merits, no fee is required under 37 C.F.R. § 1.97(b). However, should the Patent Office determine that a fee is required, the Commissioner is hereby authorized to charge Deposit Account No. 12-2475 for the fee.

Respectfully submitted,

LYON & LYON LLP

By: 

Polaphat Veravanich  
Reg. No. 45,179

Dated: July 13, 2001

633 West Fifth Street, Suite 4700  
Los Angeles, California 90071-2066  
(213) 489-1600 or (949) 567-2300

**LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S  
INFORMATION DISCLOSURE STATEMENT**

(Use several sheets if necessary)

APPLICANT:

Jing Cheng et al.

FILING DATE:

Herewith

GROUP:

1743

11000 U.S. PTO  
09/905/55  
07/13/01

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE
	AA	3,346,479	10/67	Natelson	204	301	04/09/64
	AB	3,375,187	3/68	Buchler	204	301	05/13/65
	AC	3,533,933	10/70	Strauch	204	180	04/01/68
	AD	3,539,493	11/70	Dorman	204	299	08/31/67
	AE	3,616,454	10/71	Levy et al.	204	299	03/13/69
	AF	3,640,813	2/72	Nerenberg	204	299	06/09/69
	AG	3,697,405	10/72	K. Butter et al.	204	275	11/03/69
	AH	3,773,648	11/73	Van Welzen et al.	204	299	10/25/72
	AI	3,791,950	2/74	Allington	204	299	02/14/72
	AJ	3,902,986	9/75	Nees	204	299	04/23/73
	AK	3,980,546	9/76	Caccavo	204	299	06/27/75
	AL	4,111,785	9/78	Roskam	204	180	05/16/77
	AM	4,390,403	06/28/83	Batchelder	204	547	
	AN	4,441,972	04/10/84	Pohl	204	180	04/08/83
	AO	4,479,861	10/84	Hediger	204	180	07/19/83
	AP	4,661,451	04/28/87	Hansen	435	174	
	AQ	4,699,706	10/87	Burd et al.	204	301	05/30/86
	AR	4,787,963	11/88	MacConnell	204	180	05/04/87
	AS	4,877,510	10/89	Chen	204	299	10/25/88
	AT	4,908,112	03/90	Pace	204	299	06/16/88
	AU	5,126,022	06/92	Soane	204	180	02/28/90
	AV	5,139,637	08/92	MacConnell	204	299	03/13/91

OC-86907.1

EXAMINER:

Not Yet Assigned

DATE CONSIDERED:

EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant

LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S  
INFORMATION DISCLOSURE STATEMENT

APPLICANT:

Jing Cheng et al.

FILING DATE:

Herewith

GROUP:

1743

(Use several sheets if necessary)

	AW	5,151,189	09/92	Hu Et al.	204	635	09/17/90
	AX	5,161,165	09/92	Huynh	204	299	04/25/90
	AY	5,209,831	05/93	MacConnell	204	299	06/14/91
	AZ	5,217,593	6/93	MacConnell	204	299	07/30/92
	BA	5,269,931	12/93	Hu Et al.	210	635	08/20/91
	BB	5,340,499	08/94	Shukla	204	180	10/23/92
	BC	5,344,535	09/06/94	Betts Et al.	204	183.1	
	BD	5,376,249	12/94	Afeyan Et al.	204	180	11/25/92
	BC	5,382,511	01/95	Stapelton	435	6	08/24/92
	BF	5,434,049	07/95	Okano	435	6	02/24/93
	BC	5,451,500	9/95	Stapelton	435	6	03/03/92
	BH	5,569,367	10/29/96	Betts Et al.	204	547	
	BI	5,653,859	08/05/97	Parton Et al.	204	450	
	BJ	5,589,047	12/31/96	Coster Et al	204	450	
	BK	5,605,662	02/25/97	Heller Et al.	422	68.1	
	BL	5,795,457	08/18/98	Pethig Et al.	204	547	
	BM	5,814,200	09/29/98	Pethig Et al.	204	547	
	BN	5,858,192	01/12/99	Becker Et al.	204	547	

## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO
	BO	434985	1/75	Russia			
	BP	616568	7/78	Russia			
	BQ	DE 4400955 A1	06/29/95	Germany			X
	BR	WO 93/05166	03/18/93	PCT	5		X

OC-86907.1

EXAMINER:

Not Yet Assigned

DATE CONSIDERED:

EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant

LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S  
INFORMATION DISCLOSURE STATEMENT

## APPLICANT:

Jing Cheng et al.

## FILING DATE:

Herewith

## GROUP:

1743

(Use several sheets if necessary)

	BS	WO 96/07917	03/14/96	PCT	5		X	
	BT	WO 93/05390	3/93	PCT Published				
	BU	WO 97/08293	3/97	PCT				
	BV	PCT/GB95/02024		PCT				
	BW	EP 0 471 949	2/92	EPO				
	BX	EP 0 544 969	6/93	EPO				
	BY	EP 0 287 513	10/88	EPO				
	BZ	8021679	3/73	Japan				

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

	CA	Camag, Inc. Product Literature
	CB	Fuhr et al., <u>Positioning and Manipulation of Cells and Microparticles Using Miniaturized Electric Field Traps and Travelling Waves; Sensors and Materials</u> , Vol. 7, No. 2 (1995) 131-146
	CC	"Dielectrophoretic Manipulation of Particles," Wang et al. <i>IEEE Transactions on Industry Applications</i> , Vol. 33, No. 3 (May/June 1997)
	CD	"Dielectrophoretic separation of bacteria using a conductivity gradient," Markx et al. <i>Journal of Biotechnology</i> , 51 (1996) 175-180
	CE	"Dielectrophoresis: Using Inhomogeneous AC Electrical Fields to Separate and Manipulate Cells," Ronald Pethig, <i>Critical Reviews in Biotechnology</i> , 16(4):331-348 (1996)
	CF	"Positive and negative dielectrophoretic collection of colloidal particles using interdigitated castellated microelectrodes," Pethig et al., <i>J. Phys. D: Appl. Phys.</i> , 24 (1992) 881-888
	CG	"The removal of human leukemia cells from blood using interdigitated microelectrodes," Becker et al., <i>J. Phys. D: Appl. Phys.</i> 27 (1994) 2659-2662
	CH	"Dielectrophoretic characterization and separation of micro-organisms", Markx et al., <i>Microbiology</i> (1994) 140, 585-591

OC-86907.1

## EXAMINER:

Not Yet Assigned

## DATE CONSIDERED:

EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant